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10/630,962	07/30/2003	Fabio Perini	71071	1772

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EXAMINER

KINNEY, ANNA L

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,962

Applicant(s)

PERINI, FABIO

Examiner

Anna Kinney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 11^{18,19} is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/30/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election of Group I, drawn to claims 1 through 20, in the reply filed on May 2, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the legal phraseology "said" is used in lines 2 and 4 of the abstract. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: On page 4, line 12, the phrase "such that as to" does not add meaning to the sentence. The Examiner suggests that the applicant may wish this second half of the sentence to read "in a direction *that favors* suction of the refuse by the pump itself."

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Also, reference characters 53 and 55 each have two descriptions. Reference character 53 is identified as both a separating baffle (page 10, line 7) and a separator (page 10, line 11), in particular, a cyclone separator. Reference character 55 is identified as both suction openings (page 10, line 8) and a suction fan (page 10, line 14). The Examiner requests that the applicant please clarify the identity of these items.

Appropriate correction is required.

Claim Objections

Claim 11 is objected to because of the following informalities: the numeral "10" at the end of the second line, between "said" and "first", appears to have no significance. The applicant may wish to delete this number. Appropriate correction is required.

Claim 19 is objected to because of the following informalities: the numeral "5" at the end of the first line, between "second" and "pump", appears to have no significance. The applicant may wish to delete this number. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13, 16, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 recites the limitation "said recirculation duct" in the second line of the claim. There is insufficient antecedent basis for this limitation in the claim. Claim 13 depends upon claim 8, but a recirculation duct was not introduced until claim 11.

Claim 16 recites the limitation "said suction duct" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim. Claim 16 depends upon claim 4, but a suction duct was not introduced until claim 15.

Claim 19 recites the limitation "the recirculation flow" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim. Claim 19 is dependent upon claim 18 and in turn upon claim 1, but recirculation is only discussed in claims 11, 12, 13, and 14.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Danforth (U.S. Patent 3,201,066).

With respect to claim 1, Danforth discloses a pulper device (Figure 2, item 47) for waste paper material, characterized in that it comprises: a container (Figure 3, item 60) for collecting said waste, having an inlet opening (Figure 3, item 57) for said waste; at least one pressurized water nozzle (Figure 4, item 98) which produces a jet of water

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which intercepts the waste which falls into said container, and a first pump (Figure 3, item 116) which removes the water and the waste from said container.

With respect to claim 8, Danforth discloses that said container has an elongated longitudinal extension, the inlet opening extending in the longitudinal direction of extension of said container (Figure 5 and col. 3, lines 8 to 11).

Claims 1, 2, 4/2, 5/4/2, 6/4/2, 7/4/2, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Doelle et al (U.S. Patent 6,358,367).

With respect to claim 1, Doelle et al discloses a pulper device (Figure 3, item 76) for waste paper material, characterized in that it comprises: a container (Figure 3, item 76) for collecting said waste, having an inlet opening (Figure 3, item 66) for said waste; at least one pressurized water nozzle (Figure 3, item 74) which produces a jet of water which intercepts the waste which falls into said container, and a first pump (Figure 2, item 32) which removes the water and the waste from said container.

With respect to claim 2, Doelle et al discloses that it comprises a first series (Figure 3, item 74) of pressurized water nozzles and a second series (col. 4, lines 20 to 23) of pressurized water nozzles, the jets produced by the nozzles of the first series and the nozzle jets produced by the second series having trajectories which intersect in a zone where said waste falls (Figure 3).

With respect to claim 4/2, Doelle et al discloses that two inclined surfaces (Figure 3) for guiding the jets produced by the nozzles are associated with said first series (Figure 3, item 74) and said second series (Figure 3, item 74) of nozzles.

With respect to claim 5/4/2, Doelle et al discloses that said inclined surfaces are oriented approximately parallel to the trajectory of the jets produced by the respective nozzles (Figure 3).

With respect to claim 6/4/2, Doelle et al discloses that each of said surfaces extends from the respective series of nozzles as far as a respective terminal edge (Figure 3), the terminal edges of said two surfaces delimiting a passage for conveying the water and the waste paper material.

With respect to claim 7/4/2, Doelle et al discloses that said surfaces are flat (Figure 3).

With respect to claim 9, Doelle et al discloses that said container has an elongated upper opening (Figure 3), parallel to which said first and said second series of nozzles (Figure 3, items 74) extend.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3, 4/3, 5/4/3, 6/4/3, and 7/4/3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doelle et al in view of Chupka et al (U.S. Patent 5,582,686).

With respect to claim 3, Doelle is applied as in the 102(b) rejection, above. Doelle et al does not disclose expressly that said nozzles have trajectories with different inclinations.

Chupka et al discloses that nozzles have trajectories with different inclinations (col. 3, lines 37 to 45).

With respect to claim 4/3, Doelle et al discloses that two inclined surfaces (Figure 3) for guiding the jets produced by the nozzles are associated with said first series (Figure 3, item 74) and said second series (Figure 3, item 74) of nozzles.

Chupka et al also discloses that two inclined surfaces (Figure 3, item 18) for guiding the jets produced by the nozzles (Figure 3, items 17 and 55) are associated with said first series (Figure 3, items 33a and 34 a) and said second series (Figure 3, items 33 and 34) of nozzles.

With respect to claim 5/4/3, Doelle et al discloses that said inclined surfaces are oriented approximately parallel to the trajectory of the jets produced by the respective nozzles (Figure 3).

Chupka et al also discloses that said inclined surfaces are oriented approximately parallel to the trajectory of the jets produced by the respective nozzles (Figure 3).

With respect to claim 6/4/3, Doelle et al discloses that each of said surfaces extends from the respective series of nozzles as far as a respective terminal edge (Figure 3), the terminal edges of said two surfaces delimiting a passage for conveying the water and the waste paper material.

With respect to claim 7/4/3, Doelle et al discloses that said surfaces are flat (Figure 3).

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Doelle and Chupka are analogous art because they are from the same field of endeavor, that of comminuting broke using water jets.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply the different jet trajectories of Chupka to the pulping system of Doelle to obtain the invention as specified in claims 3, 4/3, 5/4/3, 6/4/3, and 7/4/3. The motivation for doing so would have been to allow the jets relatively reciprocating movement (col. 3, lines 3 to 6).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Danforth in view of Upton, III et al (U.S. Patent 5,464,161).

With respect to claim 10, Danforth does not disclose expressly that said first pump is a chopper pump.

Upton, III et al discloses that said first pump is a chopper pump (col. 1, lines 34 to 38).

Danforth and Upton, III et al are analogous art because they are directed to a similar problem solving area, that of processing cellulose-based products into small particles to form a slurry (Upton, III et al, col. 1, lines 14 to 16).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply the chopper pump of Upton, III et al to the broke pulper of Danforth to obtain the invention as specified in claim 10. The motivation for doing so would have been to control the processing rate (col. 1, lines 25 to 28).

Claims 11, 12, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danforth in view of Plaskon et al (U.S. Patent 6,086,714).

With respect to claim 11, Danforth does not disclose expressly that it comprises a recirculation duct between said first pump and the container, by means of which a part of the flow sucked in by said first pump is recirculated inside said container. However, Danforth does disclose a bypass line between the container outlet and the first pump.

Plaskon et al discloses that it comprises a recirculation duct (Figure 1, item 16) between said first pump (Figure 1, item 30) and the container (Figure 1, item 10), by means of which a part of the flow sucked in by said first pump is recirculated inside said container.

With respect to claim 12, Danforth does not disclose expressly that the outlet of said recirculation duct is situated in a position approximately opposite an intake opening of said first pump.

Plaskon et al discloses that the outlet of said recirculation duct (Figure 2, item 54) is situated in a position approximately opposite an intake opening (Figure 2, item 56) of said first pump.

With respect to claim 13, Danforth does not disclose expressly that the outlet of said recirculation duct and the intake opening of said first pump are arranged approximately at the ends of the elongated longitudinal extension of said container. However, Danforth does disclose the elongated longitudinal nature of the container (see the 102(b) rejection, above).

Plaskon et al discloses that the outlet of said recirculation duct (Figure 2, item 54) and the intake opening of said first pump (Figure 2, item 56) are arranged approximately at the ends of the container (Figure 2, item 50).

With respect to claim 14, Danforth discloses that the bottom of said container is inclined downwardly toward the intake opening of said first pump (col. 3, lines 22 to 24). Danforth does not disclose expressly the relative location of a recirculation duct.

Plaskon et al discloses two recirculation lines. One recirculation line discharges to the vessel through the opposite wall from the pump intake. The other recirculation line discharges to the top of the vessel. The Examiner interprets this to mean that the recirculation flow may either follow the downward incline of the floor as described by Danforth, or the flow may flow downward toward the pump intake by gravity.

Danforth and Plaskon et al are analogous art because they are from the same field of endeavor, that of pulping broke.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to add a recirculation duct, with an inlet and an outlet at specific locations, to the broke pulper of Danforth, to obtain the invention as specified in claims 11 through 14.

The motivation for doing so would have been that a typical broke pulping system recirculates a portion of the pulp slurry back into the vessel (col. 1, lines 46 and 59 to 60).

Claims 18, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danforth in view of Heiskanen et al (E.P. Patent Application 1 010 804 A1).

With respect to claim 18, Danforth does not disclose expressly a thickening station to which at least partly the mixture of water and waste paper material sucked by

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said first pump is conveyed and inside which the solid content of the mixture is increased, eliminating therefrom a part of the water content.

Heiskanen et al discloses a thickening station (Figure 3, item 36) to which at least partly the mixture of water and waste paper material is conveyed (Figure 3, item 33) and inside which the solid content of the mixture is increased, eliminating therefrom a part of the water content (Figure 3, item 48).

With respect to claim 19, Danforth does not disclose expressly that a second pump, which conveys the flow sucked by said first pump, less the recirculation flow, toward said thickening station, is arranged along the delivery duct of said first pump.

Heiskanen et al discloses that a second pump (Figure 1, item 22), which conveys the flow sucked by said first pump (Figure 1, item 20), toward said thickening station (Figure 1, item 16), is arranged along the delivery duct of said first pump (Figure 1, item 20). Heiskanen et al displays a recirculation flow of zero.

With respect to claim 20, Danforth does not disclose that the mixture leaving said thickening station is conveyed to a container for subsequent conveying to a headbox associated with the paper production line and the water separated from said mixture is recycled.

Heiskanen et al discloses that the mixture leaving said thickening station (Figure 3, item 36) is conveyed to a container (Figure 3, item 38) for subsequent conveying to a headbox associated with the paper production line and that the water separated from said mixture (Figure 3, item 48) is recycled (Figure 3; and Figure 2, item 44).

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Danforth and Heiskanen et al are analogous art because they are from the same field of endeavor, that of pulping broke.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add a thickening station, a second pump, and a storage container for the pulp prior to use in the headbox, as described by Heiskanen et al, to the broke pulper of Danforth, to obtain the invention as specified in claims 18 through 20. The motivation for doing so would have been that low broke consistency requires huge buffer tanks which increase the time needed for changes of grade and complicate the regulation of the process, as well as add space requirements, big investments, and slow water circulations (col. 1, line 36 to col. 2, line 2); that the second pump is typical of a prior art broke system, which requires an intermediate tank (col. 2, lines 19 to 22 and 29 to 33); and because breaks in the production process and sometimes long discontinuous process stages must be prepared for beforehand (col. 1, lines 37 to 42).

Allowable Subject Matter

Claims 15 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 16 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is an examiner's statement of reasons for allowance: the primary reason is the inclusion of the limitation requiring a suction duct connected to the pulper.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 1,704,728 shows the use of a pump and a thickener. U.S. Patent 2,340,511 shows the use of a pump and recirculation with a pulper. U.S. Patent 2,696,766 shows a pulper with nozzles discharging water jets, and an outlet pipe adapted for a pump. U.S. Patent 3,669,830 shows the use of suction with a broke receiver chamber. U.S. Patent 4,019,953 shows the use of suction and a foraminous partition to remove dust from the air around a Yankee dryer and discharge it to a dissolving tank. U.S. Patent 5,186,791 shows an apparatus for thickening pulp. U.S. Patent 6,623,156 shows the transport of broke via a thickener to the machine's stock chest.


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